



US 20050255378A1

(19) **United States**(12) **Patent Application Publication** (10) **Pub. No.: US 2005/0255378 A1****Knight et al.**(43) **Pub. Date: Nov. 17, 2005**(54) **BATTERY WITH VIBRATION-RESISTANT JOINT BETWEEN POSITIVE ELECTRODE AND CURRENT CARRYING STRAP**(52) **U.S. Cl. 429/122; 429/129; 429/163; 29/623.1**(76) **Inventors: James Roger Knight, Llanvaches (GB); Dennis Kevill, Monmouth (GB); Charles Andrew Loyns, Ystradowen (GB); Raju Kurian, Cardiff (GB)**(57) **ABSTRACT**

Correspondence Address:

**MYERS BIGEL SIBLEY & SAJOVEC
PO BOX 37428
RALEIGH, NC 27627 (US)**

A method of manufacturing a battery includes as an initial step providing a cell for a battery having alternating positive and negative electrode plates, wherein each of the electrode plates is separated by an electrically insulative separator layer. Each of the positive and negative electrode plates includes a projecting tab extending from an adjacent upper portion thereof, the projecting tabs of the positive plates being generally aligned, and the projecting tabs of the negative plates being generally aligned. Next, the method comprises attaching a conductive connecting strap to the projecting tabs of the positive and negative plates. The method then comprises applying a cap material onto the connecting positive strap and allowing the cap material to spread and drip to the exposed portions of the projecting tabs and the adjacent upper portions of the negative and positive plates and separator material. The cap material is allowed to harden to provide a cap attached to the projecting tabs and the adjacent upper portions of the positive plates and negative plates and separator material.

(21) **Appl. No.: 10/511,997**(22) **PCT Filed: Apr. 15, 2003**(86) **PCT No.: PCT/US03/11719**(30) **Foreign Application Priority Data**

Apr. 20, 2002 (GB) 0209227.8

Publication Classification(51) **Int. Cl.⁷ H01M 6/00; H01M 2/00**